



December 6, 2011

## FRCSE leads transition to next generation nondestructive inspection tools

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Fleet Readiness Center Southeast (FRCSE) Materials Engineering Technician Warren Hansen (center) kneels to take measurements as he discusses computerized radiography equipment settings to detect stress corrosion cracks on an F/A-18 Hornet wing spar at the facility Nov. 15-16. The FRCSE team hosted Nondestructive Inspection personnel from around the Fleet during a two-day train-the-trainer seminar. (U.S. Navy photo by Victor Pitts/Released)

JACKSONVILLE, Fla. – Fleet Readiness Center Southeast (FRCSE) hosted a two-day training seminar Nov. 15-16 for Nondestructive Inspection (NDI) trainers on the next generation of inspection tools to enhance capability to the Fleet.

FRCSE Materials Engineering Division personnel are leading the Naval Air Systems Command (NAVAIR) effort to identify, test, train and transition from film-based to digital radiography with enhanced computerized imagery.

“Our site was chosen for our leading edge expertise in this particular inspection method, and because we have the equipment available as a result of our proactive pursuit of this technology years ago,” said David Stricklin, the Materials Engineering Division director. “We are on our second generation of computerized radiography (CR) equipment.”



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Materials Engineer Ian Hawkins and Materials Engineering Technician Warren Hansen hosted visitors for the two-day event from several Fleet Readiness Centers and representatives from Naval Air Warfare Center Lakehurst, N.J., Commander Naval Air Forces and other Engineering NDI Program management personnel from across the Fleet.

Hawkins said using X-ray film leaves a “costly environmental footprint.” The use of digital imaging reduces the footprint by eliminating the chemical processing of film. Technicians can reuse the digital imaging plates multiple times. CR reduces space requirements needed for images stored on film. This is particularly important aboard ship where space is at a premium.

Another advantage of digital imagery is the rapid transmission of images to other locations for viewing by NDI inspectors.

“It is easier to share information,” said Hawkins. “The Fleet takes images and spikes them to us for easier interpretation. It goes both ways.”

FRCSE NDI Program Manager Paul Kenny said digital imagery converts energy absorbed on the plate to grey-scale value (pixel intensity) on the screen. An image scanner converts the image to a digital format.

“This is a familiarization training event,” said Kenny. “There is an initial steep learning curve. The enhanced digital image has extreme utility in the right hands. The technicians who use conventional radiography must develop a new instinct for the new settings.”

Kenny said digital imagery provides portability and flexibility for improved mission capability.

The FRCSE team is leading the Department of Navy's efforts to transition from film-based to computer-based imaging. The team will rollout the CR program when it finalizes training elements in early 2012.

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Materials Engineer Ian Hawkins (center) points to a digital image of a corrosion crack on an F/A-18 Hornet aircraft wing spar in the Materials Engineering laboratory at Fleet Readiness Center Southeast Nov. 16. The Navy is converting from film-based to computer-based imagery to reduce the environmental footprint and improve service to the Fleet. (U.S. Navy photo by Victor Pitts/Released)



During a Nondestructive Inspection (NDI) tools training session at Fleet Readiness Center (FRC) Southeast Nov. 16, NDI Training Leader Anthony Sermarini from FRC East, Cherry Point, N.C., inserts a reusable phosphor imaging plate exposed to X-rays in a special laser scanner, which produces a digital image ready for immediate viewing on a computer. The image may be enhanced using image-processing software to adjust functions, such as contrast and brightness. (U.S. Navy photo by Victor Pitts/Released)



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Nondestructive inspection personnel from across the Fleet visit Fleet Readiness Center Southeast Nov. 15-16 for a train-the-trainer seminar on computerized radiography. The group is developing policies and training elements to transition the Navy from film-based to digital imaging to detect cracks on aircraft components. The digital technology will lessen the Navy's environment footprint by eliminating the chemical processing of film. (U.S. Navy photo by Victor Pitts/Released)